

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A colorimetric sensor for detecting a particular material in the air, comprising:
~~a receptor molecule specifically binding with the particular material in the air;~~ and
~~a polymer molecule whose having an altered light absorbency is altered~~ due to binding of the particular material and the receptor molecule.
2. (Currently Amended) The colorimetric sensor according to claim 1, wherein
~~said the~~ receptor molecule is linked to the polymer molecule at a portion of the receptor molecule not participating in binding with the particular material.
3. (Currently Amended) The colorimetric sensor according to claim 1 or 2, wherein
~~said alteration in the altered~~ light absorbency of the polymer molecule is caused by a molecular structural alteration in the polymer molecule.
4. (Currently Amended) The colorimetric sensor according to claim 3, wherein
~~said the~~ polymer molecule is includes polydiacetylene.
5. (Currently Amended) The colorimetric sensor according to claim 1 or 2, wherein
~~said alteration in the altered~~ light absorbency of the polymer molecule is caused by an alteration in an electron distribution state in the polymer molecule.
6. (Currently Amended) The colorimetric sensor according to claim 5, further comprising

a complex consisting of an electron-withdrawing material and a ligand specific for the receptor molecule, ~~wherein said~~ the complex is being linked to the receptor molecule via the ligand.

7. (Currently Amended) The colorimetric sensor according to claim 5 ~~or 6~~,
wherein

~~said~~ the polymer molecule is selected from a group consisting of polythiophene, oligothiophene, polypyrrole and polyvinylcarbazole.

8. (Currently Amended) The colorimetric sensor according to claim 7, wherein
~~said~~ the polymer molecule is polyvinylcarbazole.

9. (Currently Amended) The colorimetric sensor according to ~~any one of~~ claims 6 ~~to~~ 8, wherein

~~said~~ the ligand is selected from a group consisting of viruses, antigens and biotin.

10. (Currently Amended) The colorimetric sensor according to ~~any one of~~ claims 6 ~~to~~ 9, wherein

~~said~~ the electron-withdrawing material is selected from a group consisting of anthraquinone, tetracyanoquinodimethane, trinitrofluorenone and dinitrofluorenone.

11. (Currently Amended) The colorimetric sensor according to ~~any one of~~ claims 1 ~~to~~ 10, wherein

~~said~~ the receptor molecule is selected from a group consisting of sialic acid, ganglioside, antibodies, antibody fragments and avidin.

12. (Currently Amended) The colorimetric sensor according to ~~any one of~~ claims 1 ~~to~~ 11, further comprising
a water-retaining means.

13. (Currently Amended) The colorimetric sensor according to claim 12, wherein
said the water-retaining means includes a porous material.
14. (Currently Amended) The colorimetric sensor according to claim 13, wherein
said the porous material is selected from a group consisting of zeolite and porous sintered products.
15. (Currently Amended) The colorimetric sensor according to claim 12, wherein
said the water-retaining means includes an absorbent polymer.
16. (Currently Amended) The colorimetric sensor according to claim 15, wherein
said the absorbent polymer is selected from a group consisting of alginic acid, dextran, collagen, cellulose derivatives, starch derivatives, polyvinyl alcohol and sodium polyacrylate.
17. (Currently Amended) The colorimetric sensor according to claim 16, wherein
said the cellulose derivative is selected from a group consisting of carboxymethylcellulose, methylcellulose and ethylcellulose.
18. (Currently Amended) The colorimetric sensor according to ~~any one of~~ claims 1 ~~to 11~~, wherein
said the polymer molecule is modified so as to have a water-absorbing ability.
19. (Currently Amended) A filter for an air conditioner ~~equipped with including~~ the colorimetric sensor as defined in ~~any one of~~ claims 1 ~~to 18~~.
20. (Currently Amended) An apparatus for confirming a lifetime of a filter for an air conditioner, comprising:
a solution containing the colorimetric sensor as defined in ~~any one of~~ claims 1 ~~to 19~~;
a solution bath for retaining the solution; and

a means for bubbling the air before and/or after passing through the filter in the solution.

21. (Currently Amended) An air conditioner ~~equipped with~~ including the filter as defined in claim 19.

22. (Currently Amended) An air conditioner ~~equipped with~~ including the apparatus as defined in claim 20.

23. (Currently Amended) The air conditioner according to claim 21 ~~or 22~~, wherein

said ~~the~~ colorimetric sensor is placed at an upstream and/or ~~a~~ downstream side of the filter ~~and is placed~~ so as to contact ~~with~~ the air which has not been heat-exchanged.

24. (Currently Amended) The air conditioner according to ~~any one of~~ claims 21 to 23, wherein

said ~~the~~ colorimetric sensor is controlled so as to be maintained at a suitable temperature for binding with the particular material without depending upon a working state of the air conditioner.

25. (Currently Amended) The air conditioner according to ~~any one of~~ claims 21 to 24, further comprising

an optical sensor for detecting a color change of the colorimetric sensor.

26. (Currently Amended) A method for confirming a lifetime of a filter for an air conditioner, comprising using the colorimetric sensor as defined in ~~any one of~~ claims 1 to 18.